

# Work Order ID 44560

June 26, 2009 10:44:05 AM



Page 1.

Item ID: D3021-041 **GY**

Accept



Setup Start



Revision ID: A

Stop



Item Name: Tube Assembly

Start Date: 15/07/2009 Start Qty: 1.00



Cust Item ID:

Required Date: 03/08/2009 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan:

Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3021

Rev A

100

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Cut tube as per Dwg D3021 12-Drill tube as per Dwg D3021 using  
D8622: 3--Deburr 4-Weld as per Dwg D3021 QSI0041A/R 4130  
Rod Batch: \_\_\_\_\_

110

0.00



QC9- Inspect visual per QSI004- Fusion Welds

PD 09.07.01

QC

Memo

0.00

Quality Control

120

0.00



QC5- Inspect part completeness to step on W/O

- 802/07/02 (4L)

QC

Memo

0.00

Quality Control

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Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME: 7:30AM OVEN TEMPERATURE:

8:00PM FINISH TIME: 320°F

M109091 09-07-06 (R) JH

140

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

BL 09-07-6

150

Identify as per dwg & Stock Location: Star

0.00



Packaging

Memo

0.00

Packaging

9/7/6

(R) JH

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Date:

Tooling:

Date:

Stop



QC:

Date:

SPC (Y/N):

Date:

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Draw  
Number

Draw  
Rev.

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

09/07/07

H

U 09-07-07

## Picklist Print

June 26, 2009 10:44:05 AM

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**Work Order ID:** 44560

**Parent Item:** D3021-041RevA

**Parent Item Name:** Tube Assembly



**Comments:**

**Start Date:** 15/07/2009

**Required Date:** 03/08/2009

**Start Qty: 1.00**

**Required Qty: 1.00**

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
D3017-11 Rev A		Manufactured	No			100	Each	0.0000	2.0000	✓		
												
cap												
M4130NT0.750W.049		Purchased	No			100	f	0.0000	2.1929	✓		
												
4130 RD Tube .750 x.049W												

Date: Monday, 12/01/2009 2:30:24 PM  
User: Julie Dawson

# Process Sheet

Customer	: CU-DAR001 Dart Helicopters Services	Drawing Name	: TUBE ASSEMBLY
Job Number	: 44560		
Estimate Number	: 11527		
P.O. Number	:	Part Number	: D3021041
This Issue	: 12/01/2009 S.O. No. :	Drawing Number	: D3021 REVA
Prsht Rev.	: NC	Project Number	: N/A
First Issue	: / / Type : LARGE FAB ASSY	Drawing Revision	: A
Previous Run	: 43602	Material	:
Written By	:	Due Date	: 30/01/2009 Qty: 1 Um: Each
Checked & Approved By	: <u>JLD 09.01.12</u>		
Comment	: Est. 01.10.23 New Issue SM		

## Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
---------	-----------------------	---------------

1.0	M4130NT0750W049	4130 RD Tube .750 x.049W
-----	-----------------	--------------------------



Comment: Qty.: 2.1875 f(s)/Unit Total: 2.1875 f(s)  
4130 Tube .750 OD x.049W

Cut:- AISI 4130N tube, Ø3/4" x 0.049" wall

batch: M103012 \*

*scrap from previous  
scrap, already out of  
inventory.*

EL 9-6-23

2.0	D301711	cap
-----	---------	-----



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

cap

batch: B44779

EL 9-6-23

3.0	LARGE FAB 1	LARGE FABRICATION RESOURCE 1
-----	-------------	------------------------------



Comment: LARGE FABRICATION RESOURCE 1

1-Cut tube as per Dwg D3021

2-Drill tube as per Dwg D3021 using D8622

3--Deburr

4-Weld as per Dwg D3021 QSI004

A/R 4130 Rod Batch: 19317

EL 9-7-1

4.0	QC9	VISUAL WELDING INSPECTION
-----	-----	---------------------------



Comment: VISUAL WELDING INSPECTION

AD 09-07-01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

Date: Monday, 12/01/2009 2:30:24 PM  
User: Julie Dawson

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 44560

Part Number: D3021041

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

S 01/07/02 (K)

6.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3

START TIME: \_\_\_\_\_

OVEN TEMPERATURE: \_\_\_\_\_

FINISH TIME: \_\_\_\_\_

7.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

8.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: \_\_\_\_\_

9.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



W 01

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

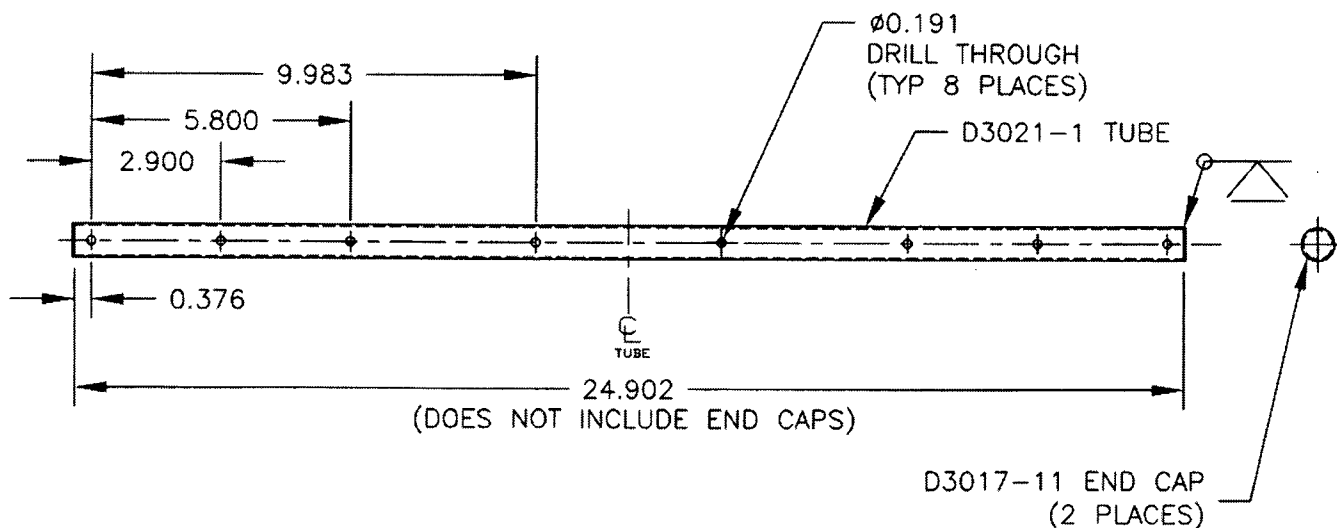
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





DESIGN	DRAWN BY	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	APPROVED	DRAWING NO. D3021	REV. A SHEET 1 OF 1
DATE 01.05.18	TITLE TUBE ASSEMBLY		SCALE 1:4
A	01.05.18	NEW ISSUE	



D3021-041 TUBE ASSEMBLY  
(D3021-1 TUBE)

NOTES:

- 1) PART IS SYMMETRIC ABOUT CENTERLINE
- 2) MATERIAL: AISI 4130 TUBE,  $\phi 0.75$  DIA x 0.049 WALL (M4130N-T0750W049)
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

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WITHOUT NOTICE  
WORK ORDER  
NO. 114560

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01.05.30

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